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JANUARY 1983

concrete

Like the phoenix --

can our industries regain their vigor?

1982 REVIEW

1983 OUTLOOK

Statistical Reference Index
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JANUARY 1983
Vol. 46 No. 9

concrete

FORMERLY MODERN CONCRETE ISSN 0279-4705

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ON THIS MONTH'S COVER

As discussed in our Outlook & Review section, the concrete industries will, hopefully, emulate the mythical phoenix and rise from the ashes during the coming year. Art by Janet Wilcox, art director.

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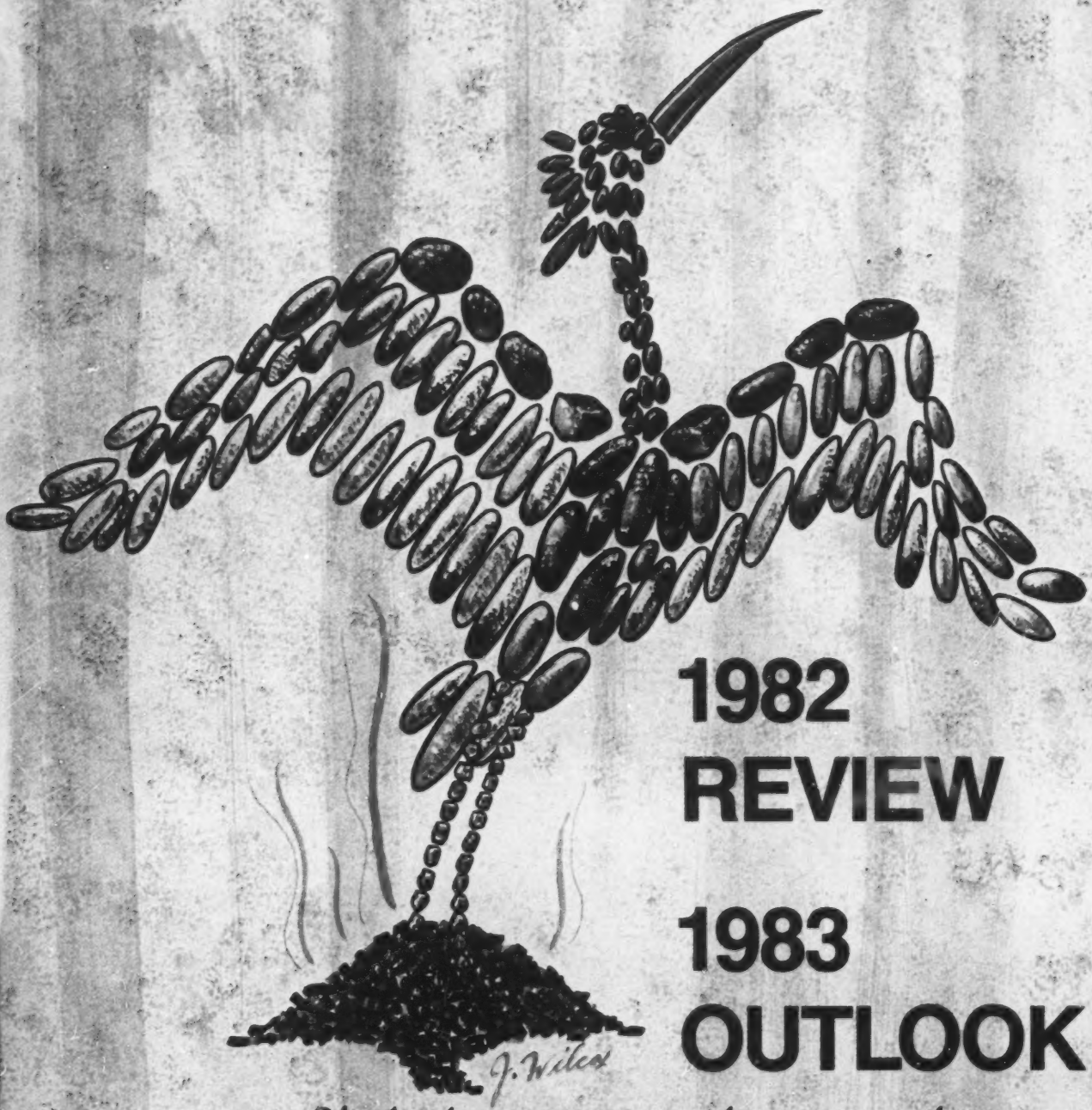

1982 REVIEW

1983 OUTLOOK

Like the phoenix – can our industries regain their vigor?

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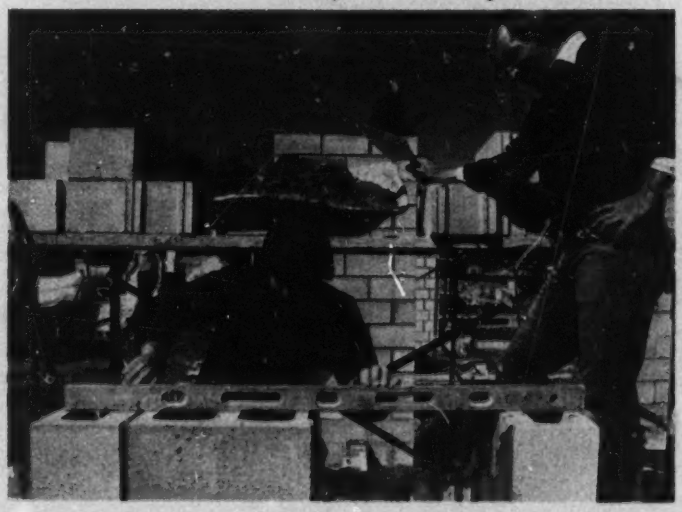
The concrete industries

BY SANDY HEROD

1982 a "bummer"— wary views on 1983

"This year was a real bummer" was the rather succinct comment offered by one of the respondents to CONCRETE magazine's latest annual questionnaire survey of the ready-mix, concrete masonry, precasting and prestressing, and concrete pipe industries. It was a feeling mirrored by the majority in these businesses whose fortunes naturally paralleled the faltering construction segment of the economy.

Obviously, the expectations for 1982, as expressed by our survey respondents a year ago, fell well short of the mark. Whereas one third or more of the responses from four of the five industry groups had looked for improved business in 1982, with estimated increases ranging up to 30%, the survey data returned to us late in 1982 portrayed a somber picture.



Most rates of decline last year ranged from an estimated 14% in concrete block to about 6% in ready-mix volume. Concrete pipe and precast concrete fell between these two figures, but our prestressing replies point to a modest drop of only a couple of percentage points.

Optimism, expressed by many respondents to previous surveys coincident with the start and continuation of our economic slide, still is in evidence with respect to the prospects for 1983. However, the pattern differs interestingly from that of previous surveys. This time, the percentage of optimistic respondents is surprisingly high, ranging from one-third to about half of given industry groups, but the degree of anticipated improvement was lower than in the preceding 2 years.

In addition to business volume trends and changes expected for the coming year, our survey questionnaires request data on cost centers and other operating factors. The information obtained is tabulated and reviewed in the following staff reports on each industry group.

The response to our 1982 survey of our industry readers was outstanding, and we wish to express to them our appreciation for their impressive cooperation. Also, we are indebted to the staff leaders of national industry associations for their participation through contribution of pertinent commentaries on industry conditions. ●

1983 Construction viewed with restrained optimism

BY JIM KOSTKA

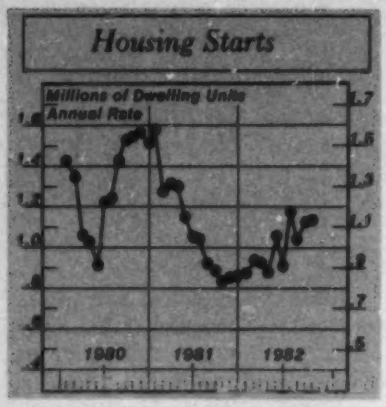
At this time last year, most economists felt we would be climbing out of the recession by mid-1982. The prime rate had started to drop from its 20.5% level in September 1981 and continued to decline throughout the remainder of the year. This, it was felt, would stimulate construction. Unfortunately, such was not the case. Although the cost of borrowing money was becoming more attractive by the day, the economic condition of the country was such that few people were willing to borrow the money to initiate construction projects. Most people had developed a "wait and see" attitude. With interest rates on their way down, people who were potential investors in construction were willing to wait a while longer to see just how far interest rates actually would drop.

Currently, the prospects for construction are viewed with mild optimism. Falling interest rates finally have stimulated the sale of single family homes. In September 1982, this sector enjoyed a sharp increase of 23.7%. The growing demand for housing is expected to continue during the remainder of 1982 and throughout 1983. There is enough pent-up demand for housing resulting from more than 2 years of recession to give this sector a steady growth potential for at least the next 4 or 5 years.

Economists who specialize in forecasting the activities of the construction industry agree that the prospects for construction, and housing in particular, are good. Robert Roy of the Portland Cement Association indicates that total physical construction in the United States will be up about 3% in 1983. George Christie, who provides the information for the 1983 Dodge/Sweet's Construction Outlook, says the *value* of total U.S. construction will be about $167.5 billion—a 12% increase over 1982. Making an adjustment for an annual inflation rate of around 6%, the actual rate of physical construction should show an increase of around 5%. The forecast by George Christie appears to be based on the assumption that construction will develop an upward momentum somewhat earlier in the year than Robert Roy of the Portland Cement Association feels it will and, as a consequence, he expects construction to show a greater total gain in 1983.

Housing

Housing, the backbone of the construction industry, is counted upon to get things rolling late in 1982 and throughout 1983. Con-



After hitting a low in October 1981, housing starts began an erratic upward climb in 1982.

struction of one family houses, which totaled about 615,000 units in 1982, is expected to jump a substantial 34% with the erection of 825,000 units in 1983. Multi-family housing also should show a healthy gain, going from 410,000 units in 1982 to 500,000 units in 1983—an increase of 22%. The combined housing markets will total about 1.33 million units, representing a gain of 300,000 units over the previous year. Expressed in percentages, the total housing industry should be up approximately 29%.

Condominiums and one family houses are expected to show the strongest gains in 1983 (in that order) as falling mortgage rates let more people with buying potential get into the market. Apartment construction also should show a gain, but it will be only about one-half as large as the gain for condominiums and one family houses.

Total floor area for dwelling unit construction in 1983 will increase proportionately to the number of units built. New construction of one family houses will have a total of 1,300 million sq. ft., up 34% from the previous year. The floor area for multi-family housing will increase an anticipated 27% with a total of 520 million sq. ft. Non-housekeeping residential floor area, however, is expected to decline 8% in 1983 with a total of 55 million sq. ft.

Nonresidential building

Historically, there has been a lag between a rising economy and residential building construction. One of the reasons is that, if nonresidential building is to improve, the environment of a strong economy is needed. After a recession, it takes time to gain economic strength; it appears an improvement in nonresidential building construction will not be manifested for at least another year.

Another reason for the nonresidential building lag is the heterogeneous makeup of this market. Composed of half a dozen or more individual building types, each with its own cycle, the market is a rather distorted composite of several individual turning points. This means that, as nonresidential building begins to recover, its turnaround will take place sequentially, not all at once.

Office buildings

During the early part of the recession, office building construction was the only bright spot in the total construction picture. The boom in office building, which has provided welcome support to an otherwise weakening nonresidential market for 2 years, is due for a major correction. There is now an excessive amount of office space, and it will be at least several years before there will be enough occupants to fill the surplus. The speed at which this takes place depends a great deal upon the speed of the economic recovery.

The office boom was created by an explosive surge in the white collar labor force which reached its peak before 1980 and since has been diminishing. This factor has been compounded by the deep recession and rising unemployment occurring just at the time when office buildings, started a year and a half ago, became available for occupancy. The oversupply of space will be a heavy drag on the recovery of the nonresidential building market in 1983 and in 1984 as well. As a result, the value of office building construction should experience a 24% drop in 1983 with a volume of $12,800 million.

Stores, other commercial buildings

There is a close correlation between stores and housing. As people build homes, stores also have to be built to supply food and merchandise. It's a simple case of one type of construction stimulating another.

Contracting for stores and shopping centers has been in almost steady decline since early 1979. Now that housing construction has bottomed out and is on the way up, stores and other commercial buildings are certain to follow a parallel path. In 1982, this segment accounted for $10,250 million worth of construction. A healthy gain of 19% is anticipated for this category in 1983 when its total should reach the $12,200 million level.

Construction of warehouse space has been growing relative to square footage of store space over the past decade, suggesting more intensive usage of selling space. This type of construction follows a regular cycle. First the stores are constructed, then warehouse construction follows soon afterward. Since the mid-1970s, the cumulative total of warehouse construction has matched the square footage for store space on a one-for-one basis.

Manufacturing buildings

High unemployment means there is little need to expand or build new manufacturing facilities. In all probability, the value of manufacturing building construction will drop close to 24% in 1983 with a volume of $6,750 million. This sector of the construction market isn't expected to show any marked improvement until unemployment drops well below the 12% level that now exists. Not until such major industries as automobile and steel begin to recover economically, can we expect industrial building construction to bounce back.

Institutional buildings

The withdrawal of federal financial support has tended to curtail severely institutional construction. Falling school enrollments has contributed to the decline. Instead of schools being built, quite a few are being closed. Institutional building construction, as a total, should show about a 9% increase in value, but the floor area will be only 2% higher in 1983 than it was in 1982.

Contributing to the 1983 floor space gain will be a 1% increase for educational facilities, a 3% rise for hospital and health structures, and a 2% increase for all other nonresidential buildings.

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Public works

Public works will be last among the three major construction segments to adjust to the Reagan Administration's redirection of economic priorities. The consequences of the proposed transfer of responsibility from federal to local governments for all but a few functions already can be seen in the recent decline of public works construction. With federal programs currently funded at about 85% of authorization, and state and local governments unable to make up the difference, total contracting of public works construction has declined 15% since 1979. After adjustment for inflation, the actual physical construction of public works has fallen about 30%. Funding of federal programs will continue to be reduced for the next several years; thus, the direction this type of construction takes will be totally in the hands of state and local governments.

In 1983, highway and bridge construction, although badly needed, will show no gain from the $12,000 million expenditure in 1982. Sewer and water construction will do even worse by dropping from 1982's $7,250 million to $6,750 million in 1983, a decline of 7%. Other public works construction seems destined to suffer a similar fate with a forecasted drop of 5%, going from $6,350 million in 1982 to $6,050 million in 1983.

Utilities

This category is made up of only a few, but very large, construction projects. As an example, in 1982, a total of 12 projects—three pipelines and nine electric power plants—accounted for 80% of the year's estimated total of $9 billion of utility construction.

Construction in this category is going to fall an anticipated 6% in 1983 when the total reaches $8.5 billion. Contributing to the 1983 construction activity will be nine electric utilities that are likely to break ground. Three are located in Texas; however, no major pipeline construction is scheduled for 1983.

Because of the size of the projects involved, the addition or deferment of just one project could cause a substantial change in the numbers when final 1983 figures for this type of construction are tabulated. ●

Estimated U.S. Construction of Dwelling Units And Square Footage of Residential and Nonresidential Buildings in 1983

Residential buildings		1981 Actual	1982 Preliminary*	1983 Forecast	% Change 1983/82
Dwelling units (thousands of units**)	One-family houses	674	615	825	+34
	Multifamily housing	450	410	500	+22
	Total housekeeping residential	1,124	1,025	1,325	+29
Floor area (millions of sq. ft.)	One-family houses	1,079	970	1,300	+34
	Multifamily housing	478	410	520	+27
	Nonhousekeeping residential	60	60	55	− 8
	Total residential buildings	**1,617**	**1,440**	**1,875**	**+30**
Nonresidential buildings					
Floor area (millions of sq. ft.)	Office buildings	317	253	175	−31
	Stores & other commercial	404	302	340	+13
	Manufacturing buildings	185	115	125	+ 9
	Total commercial & manufacturing	906	670	640	− 4
	Educational	74	74	75	+ 1
	Hospital & health	60	63	65	+ 3
	Other nonresidential buildings	126	108	110	+ 2
	Total institutional & other	260	245	250	+ 2
	Total nonresidential buildings	**1,166**	**915**	**890**	**− 3**

**Eight month actual; four months estimated.*
***F.W. Dodge basis.*

Estimated Dollar Value Of U.S. Construction in 1983

Residential buildings		1981 Actual	1982 Preliminary	1983 Forecast	% Change 1983/82
Contract value (millions of dollars)	One-family houses	$ 38,363	$ 36,850	$ 53,100	+44
	Multifamily housing	17,821	16,800	22,900	+36
	Nonhousekeeping residential	3,879	4,325	4,100	− 5
	Total residential buildings	**$ 60,063**	**$ 57,975**	**$ 80,100**	**+38**
Nonresidential buildings					
Contract value (millions of dollars)	Office buildings	$ 19,268	$ 16,925	$ 12,800	−24
	Stores & other commercial	11,733	10,250	12,200	+19
	Manufacturing buildings	7,530	8,900	6,750	−24
	Total commercial & manufacturing	$ 38,531	$ 36,075	$ 31,750	−12
	Educational	$ 5,819	$ 6,125	$ 6,650	+ 9
	Hospital & health	6,218	6,850	7,575	+11
	Other nonresidential buildings	7,681	7,500	8,100	+ 8
	Total institutional & other	$ 19,718	$ 20,475	$ 22,325	+ 9
	Total nonresidential buildings	**$ 58,249**	**$ 56,550**	**$ 54,075**	**− 4**
Nonbuilding construction					
Contract value (millions of dollars)	Highways & bridges	$ 11,126	$ 12,000	$ 12,000	—
	Sewer & water	7,677	7,250	6,750	− 7
	Other public works	5,891	6,350	6,050	− 5
	Total public works	$ 24,694	$ 25,600	$ 24,800	− 3
	Utilities	$ 7,183	$ 9,000	$ 8,500	− 6
	Total nonbuilding construction	**$ 31,877**	**$ 34,600**	**$ 33,300**	**− 4**
All construction					
Contract value (millions of dollars)	**Total construction**	**$150,189**	**$149,125**	**$167,475**	**+12**
	Dodge Index (1977 = 100)	107	107	120	

Views of national association leaders:

CEMENT: "some improvement in 1983"

Richard E. Reuss
President
Portland Cement Association

At an estimated 65 million tons, U.S. cement use in 1982 was at the lowest level since 1962. Shipments fell about 6% from 1981 and were 22% below 1973, the industry's best year. Some key indicators in the closing weeks of 1982 suggest that recovery—however modest—may occur in 1983. PCA market and economic researchers are projecting 1983 U.S. cement consumption at 69 million tons, which would amount to a 6% gain from 1982, but still well under the 78 million tpy average annual consumption of the 1970s.

Sharper increases, however, are projected for later years as the economic recovery pumps new life into depressed construction markets, particularly residential and related commercial building. For the next 5 years, PCA forecasters estimate cement consumption as follows:

	Millions of Tons
1982	65.0
1983	69.0
1984	76.5
1985	82.5
1986	85.0
1987	85.0

Economic and construction outlook

If recovery is in fact close at hand, economic growth in the next few years likely will be relatively slow by historical standards. Construction-related capital investment by industry will be impeded by low profits and high debt resulting from the recession. Housing starts likely will not attain the 2 million annual level achieved in previous recoveries. In short, the construction industry has been damaged severely by the recession, and renewed growth will be slow and difficult. Dun and Bradstreet reports that business failures among building contractors reached a new high in 1980, increased another 50% in 1981, and rose an additional 36% in the first three quarters of 1982.

As in all business cycles, economic recovery finally does come. Home building usually turns up before other construction markets. Housing starts and permits have risen since late 1981, and other construction indicators have turned upward beginning in the first quarter of 1982. Although any reversal in the decline in interest rates could curtail the expansion, we believe the construction recovery has started and will continue, at a moderate pace, for the next several years. Following are PCA's projections for major sectors for private and public construction:

Residential: While housing will not reach previous boom proportions, sizable percentage gains are projected for 1983 and 1984. Housing starts are forecast to peak at about 1.8 million in 1985 compared to an estimated 1 million in 1982. As measured by annual dollar volume (stated in 1977 dollars), a 1985-86 peak of $63 billion is projected, compared with previous highs of $66 billion in 1978 and $73 billion in 1973.

Industrial building: Factory construction is projected to decline 2% in real terms in 1982 and another 9% in 1983, with increases expected in later years. The much-needed reindustrialization of

		Forecast				
Region	1982	1983	1984	1985	1986	1987
Eastern	11,400	12,000	12,600	13,000	12,500	12,000
Great Lakes-Midwestern	8,900	9,800	11,300	12,000	12,500	11,500
Southeastern	10,800	11,300	12,800	13,600	14,000	14,000
North Central	3,300	3,600	4,000	4,500	5,000	5,500
Rocky Mtn.-Northwest	5,400	5,800	6,400	7,400	8,000	8,500
Pacific-Southwest	8,600	9,100	10,400	12,000	12,500	13,000
South Central	16,600	17,400	18,800	20,000	20,500	20,500
Total	65,000	69,000	76,500	82,500	85,000	85,000

Source: PCA Market and Economic Research

America is likely to be delayed while business attempts to mend the damage suffered during the current recession; that damage includes high debt, weak profits, and low capacity utilization.

Office building: The office market has been strong over the past 3 years, especially in large cities in the South and West. But vacancy rates are rising, and the boom probably has ended in many areas. However, office construction should remain a growth market in the 1980s, gaining its strength from the migration of employment from manufacturing to services and from the Snow Belt to the Sun Belt.

Highways and streets: Paving has been on the decline since the peak years of the Interstate program of the mid-1960s. Now, with the nation's roads in great disrepair, many states and municipalities have been forced to increase spending for repair, maintenance, and reconstruction as well as new construction.

The federal excise tax on gasoline has not been increased for more than 20 years nor have fuel taxes in most states kept pace with highway needs. Increased federal and state tax levies are a likely source of badly needed additional funds for highways, streets, and bridges in the 1980s.

Other public construction: This category consists of sewer systems, water supply facilities, and other open construction. The critical needs in this area are universally recognized, but political considerations have delayed necessary funding of new and upgraded facilities. We believe public pressure will result in additional funding for these critical needs in the 1980s.

Outlook for cement

Overall, PCA forecasters are projecting a 20 million tpy increase in cement consumption in the 1980s—from 1982's depressed 65 million tons to 85 million tons in 1986 and 1987. The next peak in shipments will exceed every previous year except 1973. On a regional basis, cement consumption is projected in the accompanying table. ●

READY MIXED CONCRETE: outlook for 1983

Jon I. Mullarky
Vice President, Promotion
National Ready Mixed Concrete Association

Traditionally, housing has led the construction industry out of a recession. As 1982 closes, we are beginning to see evidence that points toward the long awaited upturn in residential construction, a major market for the ready mixed concrete industry. There is reason to be a little optimistic about 1983.

Preliminary estimates of ready mixed concrete production for the year just ended are in the neighborhood of 180 million cu. yd. with a value of about 7.7 billion dollars. This was the lowest production level since 1975. A relatively strong office construction market, along with increased local activity in the housing and agriculture segments, undoubtedly kept ready-mix sales from dipping even lower.

Another factor which helped many producers was their increased market promotion activity. Members of NRMCA's Promotion Committee have identified several million cubic yards of paving promoted by the industry in all parts of the country. Sales representatives in the industry have not been shy about asking for the parking lot business and doubling or tripling the concrete sold to small commercial jobs.

What about 1983? An improving residential market, the possibility of increased levels of highway and other public works construction, and continued promotion should boost ready mixed concrete production by about 6% to 190 million cu. yd.

CONCRETE BLOCK: hope for better times

Paul Lenchuk
President
National Concrete Masonry Association

Construction is dependent upon decisions that have more to do with money supply than with demand. Thus, the actions of the Federal Reserve Board can have far more impact on construction than the decisions of Congress, the President, or factors at work within the construction industry. The action of the Federal Reserve tends to be made on the short term and no advance signals are given—one of the reasons for the uncertainty of economic forecasts which traditionally are made well in advance.

At this writing, it appears the Federal Reserve is loosening its tight money policies. If this proves correct, then one large step toward spurring construction will have been taken. It remains for Congress to keep the national deficits declining; as yet, such a policy seems uncertain but there is hope. Yet another barrier to improved construction is inflation. While the rate is declining, there is the possibility that, as economies begin to revitalize, demand for oil might bring price increases, shortages, and more inflation. However, for the present, this is not a real threat.

Perhaps the most hopeful barometer is the gradual improvement of construction in several European countries, particularly Great Britain. Like the United States, the U.K. had to cure the ills of inflation, high interest rates, and tight money; having paid for the cure, construction is rebounding. It would appear that we are but a year behind Great Britain. Since their upturn has been in progress 6 months, we should see construction rebounding with the March 1983 season.

On the basis that these assumptions have validity, the outlook for home construction looks more hopeful in 1983 than at any time since 1979. If mortgage rates decline so that home prices do not require more than one-third of the income of those who have been waiting to buy, we'll see an explosion of home construction.

At the moment, it appears that, starting in March, at least a mild upturn will be taking place, building momentum, and, with luck, continuing through the construction season. We believe it will happen as long as the forces mentioned are kept under control.

We predict concrete block sales of about 3.2 billion equivalent units in 1983. This total is less than the production of 1977, a rather good year, but better than 1980, 1981, or 1982.

PRESTRESSED CONCRETE: expected growth in 1983

Fromy Rosenberg
Executive Director
Prestressed Concrete Institute

In spite of a somewhat recessive economy, the precasting and prestressing industry is moving ahead with a high degree of confidence in both maintaining its position in the existing markets as well as capturing new ones.

In 1982, a high-power committee was formed to look into the immediate research and development needs of the industry. This committee identified seven most needed areas on which the industry should focus to successfully grow through the '80s. PCI producer and associate members were solicited for pledges for the program; at this time, it is expected that the industry will support the program.

PCI has expanded support to local associations and regional activities. At the January 1982 board of directors meeting, a new policy was approved which further encourages the establishment of regional activities. In addition to the existing PCI regional programs, two new regions—Texas and Florida—have instituted a strong marketing program.

PCI continues to have a strong commitment to education. Our members recognize the importance of educating engineers to work in our industry, and of exposing future consultants to prestressed concrete design. The association also has broadened its educational activities to include contractors.

I believe that PCI national and local programs will enable our industry to grow beyond our present $2 billion sales volume.

CONCRETE PIPE: much depends upon Congress

Richard E. Barnes
President
American Concrete Pipe Association

Concrete pipe production declined at an unprecedented rate during the past 3 years, and sales dropped to levels unexperienced since the industry began compiling statistics. Housing starts declined to record low levels, and federal spending has been drastically curtailed in the areas which would be most beneficial to the industry.

We are a cyclical industry and expect ups and downs, but the current recession is longer and deeper than anyone would have projected. Sales declines over the past 3 years clearly indicate producers of concrete pipe are having a very difficult time.

1980 sales were down 16%, 1981 sales dropped another 13.8% and, although figures have not yet been collected for 1982, we are assuming an additional decline of as much as 14%.

Distribution of sales also has experienced some fairly major shifts over the past years. Production share declined in the Eastern and Central regions, and increased in the Southwestern, Western, and Midwestern regions, while the Southeastern region has remained fairly static.

The lame duck session of Congress scheduled for November 29 through December 17, 1982, will have considered a great deal of legislation that affects our industry and the entire construction industry. Only one federal agency, the Environmental Protection Agency, was funded before the campaign recess which began on October 2. EPA's Construction Grants Program has $1 billion in old money; $2.4 billion for fiscal 1982, which was passed in the July supplemental bill; and another $2.4 billion for fiscal 1983, approved by President Reagan on September 30, for a total of $5.8 billion for state priority projects. Approximately 27% of each dollar

currently spent on EPA waste treatment construction projects is for pipe in place, so it is a critical market for the concrete pipe industry.

The following federal agencies, which impact upon our markets, remain unfunded and dependent upon action by Congress: Federal Highway Administration, Farmers Home Administration, Soil Conservation Service of the Department of Agriculture, the Corps of Engineers, and the Bureau of Reclamation of the Department of the Interior. We anticipate significant spending cuts within the Administration's proposed fiscal 1983 budget (October 1, 1982 to September 30, 1983) in all the above construction programs with the exception of the Federal Highway Administration.

Before the October 2 recess, Congress passed a highway continuing resolution, based on Senate bill 2574, to cover October 1 to December 17 in a total amount of $4.92 billion. With an $8 billion obligational ceiling on the highway program, the lame duck session of Congress must fund the remainder of fiscal 1983 monies. As of this writing, there appear to be major problems between the House Public Works and Transportation Committee and the House Ways and Means Committee. Public Works and Transportation authorizes funding; Ways and Means controls the Highway Trust Fund which must be extended to provide user fees to balance trust fund income vs. outlays. When this appears in print, we expect the jurisdictional dispute will have been settled, clearing the way for a multi-year bill that includes a 5 cents per gallon increased user fee in the gas tax plus a multi-year extension to the Highway Trust Fund to raise the program level from $8 billion to a graduated $12 to $16 billion.

We are surveying our membership to determine the outlook for 1983. It appears about 50% of our membership anticipate 1983 sales comparable to 1982; the other 50% are projecting increased sales. This survey is not being conducted on the same precise basis as our industry statistical program, and it would be difficult to separate optimism from actual construction plans. We are somewhat in the same position as when I prepared our 1982 outlook. Interest rates also were tending down at that time, and, as then, we are hopeful they will continue down so that home building will turn around and the concrete pipe industry will immediately begin to feel the impact through the installation of sewers and roads.

There has been a great deal of publicity over the past year about the critical need for repairing and replacing the infrastructure of this country. Everyone agrees our highways, sewers, water systems, bridges, etc. must be rebuilt as a prerequisite to economic renewal. Whether that renewal will become the focus for domestic policy during this decade still is questionable. We urgently need an orderly approach to public capital investment to replace the legislative procedures of the past; it appears the new Congress will address the "New Federalism" legislation that will impact upon all the federal agency programs of vital concern to the concrete pipe industry.

PRECAST CONCRETE: diverse opportunities

Robert W. Walton
Executive Vice President
National Precast Concrete Association

Forecasting the future performance of the U.S. economy and specifically of the precast concrete industry is a hazardous undertaking. At this writing, the "experts" have standard forecasts which predict sluggish to moderate growth for the next three quarters; a span of time that extends well into 1983. However, there seems to be little assurance that such forecasts really reflect what the economy is going to be in 1983. The facts seem to indicate that recovery still has not begun and that business conditions continued to worsen as the fourth quarter of 1982 began. This is a general observation and not necessarily directly related to performance in the segment of the precast concrete industry represented by the National Precast Concrete Association.

The make-up of the NPCA membership cuts across widely diverse product line interests. Because of this diversity, there never has been a well-defined business activity pattern. A significant percentage of the NPCA membership is tied closely to the housing market; other interests relate closely to the following product line areas—agricultural products, modular paving, sanitary and storm manholes, transportation products, utility structures for power, light, and communications, and water and sewage systems.

As generally known, both the housing and agricultural markets have been severely depressed throughout 1982; the outlook for 1983 is not promising. However, at this juncture (October 1982) interest rates are moving downward which could translate into a pick-up in sales to the housing sector. Agricultural sector revival is more complex and not conducive to speculation.

The modular paving market, pioneered in Europe and Canada, has made significant strides in the United States; this market seems to be growing despite the sluggish overall economy. One New England producer reports a strong market for modular paving stones in the New York City area. The outlook for paving products looks promising for 1983.

Transportation products, of course, depend (for the most part) on government spending for road building, repairs, and improvements. There is evidence that there is growing recognition of the need to rebuild America's highway system and we predict that state and federal authorities will come to grips with this problem soon which will translate to improved volume for those who manufacture precast concrete products for the vast highway system.

U.S. r/m consumption drops for 4th year

Concrete's survey shows decrease in production

BY SID LEVINE

Ready mixed concrete consumption in the United States dropped in 1982 for the fourth consecutive year. Demand fell to an estimated 182 million cu. yds., about 6% below that of 1981 and 19% under the 1978 record of 224.7 million cu. yds.* The value of industry shipments in 1981 was estimated at $8.237 billion ($3.533 billion in constant 1972 dollars).

About 40 to 45% of ready-mix output is used in residential construction, 25% in nonresidential building, 8 to 20% in building highways and streets, and the remainder in other nonbuilding construction. Housing starts in 1982 are projected at 1 million units, compared to 1.1 million in 1981 and to the peak level of 2.4 million units in 1972.

The value of new construction put-in-place in the United States in 1981 amounted to $237.04 billion ($98.7 billion in constant 1972 dollars, or $155.8 billion in constant 1977 dollars). A drop of about 8.5% is forecast for 1982 followed by a 3% rise in 1983. A detailed review and forecast for construction in the United States, prepared by Jim Kostka, Concrete's director of marketing and research, appears in this issue.

Concrete's annual survey of ready mixed concrete producers indicates that 36% of the producers increased their 1982 output; 56% decreased production; production for the remaining 8% showed no change from 1981. There were 5,433 ready-mix establishments in the United States in 1981, according to the Department of Commerce. Plants with less than 20 employees accounted for 75% of the establishments. The ratio of dry batch to central mix plants was two to one in this survey.

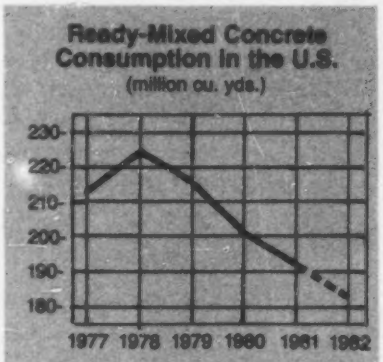
Business changes

Production increases for 1982, compared with 1981, ranged from 23% for ready-mix producers in the Southeast to 52% for the North Central states. Decreases in output ranged from 38% in the Southwest to 67.5% in the Northeast; about 8% of the respondents noted no production change for 1982 vs. 1981.

About 40% of the survey respondents expect business increases in 1983 with average increases ranging between 12-15%. Twelve percent of the respondents felt there would be a drop in their ready-mix business ranging between 5-15%. Percentages for "no expected changes" ranged from 24 to 42%, and, for the "not sure" group, ranged from 9-26%.

Price and cost changes

About 40% of the survey respondents indicated they had raised ready-mix prices in 1982. Price increases ranged between 1-15% and averaged 7.3%. Hourly wages



	million cu. yds
1977	206.5
1978	224.7
1979	219.8
1980	202.5
1981	193.8
1982 (est.)	182

Anticipated plant and equipment expenditures for 1983		Percent of respondents
New plants—cost ranges (dollars)	$ 50,000-100,000	1.8%
	100,001-200,000	1.8
	200,001-300,000	1.5
	300,001-500,000	.4
	500,001 + more	.8
Modernizations/expansions—cost ranges (dollars)	$ 10,000- 49,999	6.7%
	50,000- 99,999	2.7
	100,000-199,999	3.5
	200,000-499,999	.8
	500,000 + more	—
New equipment—cost ranges (dollars)	$ 50,000 or less	3.5%
	50,001-100,000	6.4
	100,001-200,000	2.1
	200,001-300,000	2.4
	300,001-500,000	2.1
	500,001 + more	.5

Approximately 4 cu. yds. of ready mixed concrete are produced from 1 short ton of portland cement. In 1981, ready mixed concrete accounted for 68.9% of the 70.228 million tons of portland cement shipped by producers from plants in the United States.

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were increased in 1982 by 73% of the respondents; the average increase was 8%. Price and wage change ranges for the several U.S. regions are given in the accompanying tables.

Maintenance costs rose about 11.7% in the United States in 1982, according to Concrete's survey. As usual, the most troublesome maintenance problems were attributed to trucks and mixers. Tires, transmissions, engines, drive trains, drums, hydraulic systems, and suspensions all contributed to maintenance needs.

Raw material costs for respondents rose in 1982 about 7.8%, ranging between 2-25%. Fuel and energy accounted for a 9.6% increase, within a wide range of 1-40%. In response to the query, "What % of your sales dollar was spent on advertising, marketing and/or promotion?" the average allotment by the respondents ranged between 1.4-1.9%.

Anticipated 1983 expenditures

Ready mixed concrete producers were queried in this Concrete survey on their 1983 plans for plant and equipment expenditures, including new plants, modernizations, expansions, and new equipment. Expenditures for new plants in 1983 were projected by 6.3% of the producers. About 1.2% of the respondents estimated new plant costs to range upward from $300,000 in 1983.

Modernization and expansion projects have been planned by 14% of the respondents. Cost estimates ranged from around $10,000 to over $500,000. About 17% of the respondents indicated they expected to buy new equipment in 1983. Anticipated expenditures ranged between $50,000 to more than $500,000. ●

	North-east	South-east	North Central	West	South-west
Production changes: 1982 vs. 1981 (percent)					
Respondents with increases	27.5%	23.0%	52.0%	28.0%	47.0%
Increase ranges:					
1-10%	18 %	38 %	29 %	29 %	47 %
11-20	46	38	35	35	13
21-30	9	12	25	18	—
31-40	18	12	5	12	13
41+	9	—	17	6	27
Respondents with decreases	67.5%	66.0%	42.0%	67.0%	38.0%
Decrease ranges:					
1-10%	41	26	16	23	42
11-20	41	39	44	30	42
21-30	7	13	7	20	8
31-40	7	22	3	20	8
41+	4	—	3	7	—
No production change	5.0%	11.0%	6.0%	5.0%	15.0%
Anticipated business changes: 1983 vs. 1982 (percent)					
Respondents anticipating increase	30.0%	41.0%	40.0%	46.0%	43.0%
Average increase anticipated	12	15	13	13	15
Range	3-20	5-30	2-50	4-25	1-20
Respondents anticipating decrease	5.0%	13.0%	10.0%	15.0%	17.0%
Average decrease anticipated	5	12	15	15	10
Range	—	2-20	5-25	2-25	2-20
No change expected	42.0%	31.0%	24.0%	28.0%	31.0%
Not sure	23.0%	15.0%	26.0%	11.0%	9.0%
Price and cost changes: 1982 vs. 1981 (percent)					
Price changes:					
Respondents indicating increases	39.5%	36.8%	32.3%	37.7%	54.3%
Average increase	6.5	7.6	6.0	6.7	9.5
Range	1-15	4-15	2-15	2-12	1-15
Hourly wage changes:					
Respondents indicating increases	67.5%	71.8%	84.5%	75.4%	86.7%
Average increase	6.9	7.4	8.2	9.1	8.1
Range	5-13	3-15	3-15	5-20	5-12
Maintenance cost changes:					
Respondents indicating increases	77.0%	89.0%	90.0%	88.0%	91.0%
Average increase	11.4	12.2	11.9	10.0	12.7
Range	1-30	5-50	2-35	4-20	1-25
Raw materials cost changes:					
Respondents indicating increases	74.0%	86.0%	72.0%	76.0%	85.0%
Average increase	9.1	6.9	7.3	7.6	7.9
Range	3-25	2-10	2-20	2-12	2-15
Fuel/energy cost changes:					
Respondents indicating increases	51.0%	80.0%	77.0%	58.0%	73.0%
Average increase	14.4	7.0	9.3	8.7	8.5
Range	2-40	1-29	2-40	2-33	2-20
Respondents indicating decreases	9.0%	3.0%	—	11.0%	9.0%
Average decrease	6.5	5.0	—	6.7	5.0
Range	1-10	—	—	1-12	1-10
Sales dollar allotment for advertising/marketing/promotion in 1982 (percent):					
Respondents alloting					
½%-0	40.0%	42.0%	43.0%	33.0%	42.0%
1%	26	27	26	26	22
2%	21	17	18	18	8
more than 2%	13	14	13	23	28
Average allotment	1.4%	1.5%	1.4%	1.9%	1.5%

	1977	1978	1979	1980	1981	1982*
Ready mixed concrete:						
Consumption in the U.S. (in million cu yds)	206.5	224.7	219.8	202.5	193.8	182.0
Value of shipments (in billion dollars)						
In current dollars	$ 5.680	6.903	8.028	8.045*	8.237*	—
In constant (1972) dollars	$ 3.695	4.035	4.113	3.661*	3.533*	—
Total new construction put-in-place in the U.S. (value in billion dollars)						
In current dollars	$173.829	205.561	230.781	230.273	237.037	—
In constant (1972) dollars	$111.333	116.943	114.698	103.527	98.700*	—
In constant (1977) dollars	$173.395	181.967	179.265	160.696	155.834	143.0
New housing units started (in million units)	2.002	2.036	1.760	1.313	1.100	1.0

*Estimate. Source: U.S. Dept. of Commerce; Concrete magazine estimates.

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Masonry production

Producers hope for improvement in 1983

Summary
1982 Concrete Masonry Survey

Review of 1982	
Production (as reported in 8-in. equivalents)	
1982 vs. 1981	
Up (% of replies)	23.8%
Down (% of replies)	65.8%
Same as '81 (% of replies)	10.3%
Overall volume change	−13.7%
Lightweight vs. standard weight units	
% reporting a mix	72.9%
Of that number, % increasing l.w.'s share of mix	17.6%
% decreasing l.w.'s share of mix	33.6%
same ratio—l.w. to st. w.	48.6%
Prices	
% raising prices in '82	32.9%
% increase (weighted average)	7.2%
Costs	
• Wages	
% paying increase in '82	62.3%
% increase (weighted average)	7.6%
• Raw materials	
% paying an increase	74.1%
% increase (weighted average)	7.3%
• Fuel/Energy	
% paying an increase	73.5%
% increase (weighted average)	12.2%
• Transportation	
% paying an increase	68.3%
% increase (weighted average)	7.8%
• Maintenance	
% paying an increase	74.1%
% increase (weighted average)	9.6%
• Promotion	
spent 1% or more of sales $	64.5%
average (weighted) spent	2.2%
Outlook for 1983	
Business expectations	
% expecting increase	41.2%
% increase expected (weighted)	12.6%
% expecting decline	12.2%
% decline expected (weighted)	12.0%
% expecting no change from '82	23.8%
% unsure	22.5%
(% of responses rounded off; will not total 100%)	
Plans for 1983	
% planning any expenditures	40.6%
Of that number:	
% planning new plants	6.3%
% planning modernization	33.3%
% planning equipment purchases	60.3%
(% of responses rounded off; will not total 100%)	

BY PATRICIA MURPHY

Unless you just flew in from Mars, you know 1982 was a bad year for construction and every industry dependent upon building. Certainly, concrete masonry producers are feeling the effects of more than 2 years of depressed markets. Respondents to Concrete's 1982 survey of the industry reported a production decline of nearly 14%, nationwide, compared to their 1981 levels.

Regionally, the greatest decline occurred in the North Central states where production of 8-in. equivalents was down almost 22% from the respondents' totals of 1981. Only one area, the Southwest, reported a modest increase of 3.2%. From the Southeast, respondents reported a 16.3% decline; in the Northeast, the minus figure

continues to decline

was 11.9%; and, in the West, production decreased, compared to 1981, by 11.2%.

About 73% of those who answered the survey produce both lightweight and standard weight units (the remaining 27% either produce all lightweight or all standard weight). Nearly 34% of those who produce both types decreased their lightweight production, another 17.6% increased production of lightweight units, but almost half of the respondents made no change at all in the product mix.

The majority of survey respondents cited interest rates as the primary cause of depressed construction markets. In one way or another, almost everyone answering the survey commented on the high cost of money both for builders attempting to finance projects and for home buyers trying to find mortgages.

Poor productivity and the attitude of labor also came under fire. One respondent went so far as to say that "unless the masonry trades do their part, the block business is finished."

Another producer noted that lack of promotion is "the real root of the problems faced today by our industry," adding that the 1% of the sales dollar which his company spends "is many times what our competitors (other block producers) spend." The survey seems to bear out his assessment—only about 65% of the respondents earmark 1% or more of each sales dollar for promotion; the national weighted average was 2.2%.

Almost unbelievable bureaucratic bungling came to light in the comment of one producer: "The Small Business Administration termed an area close to us a blighted area and built a new concrete block plant. When it got into operation, it cut prices below cost of all other block plants in the area. Trying to get some of the business in our local area, we had to cut prices to meet those of the new plant—prices which are about 15% under our costs. All five block plants within 100 miles have been affected in the same way." One has to ask what bright brain at the SBA decided a block plant was just the business to support with a loan in an area already served by six such facilities.

Costs

The overall cost of doing business—wages, raw materials, fuel/energy, transportation, and maintenance—rose in 1982 for survey respondents by a weighted average of 10.7%. On the other side of the ledger sheet, decreased revenues were the natural result of decreased building activity and production. Competition for what business there was kept some 67% of the 1982 respondents from raising prices. The 33% who did raise prices increased the cost to the buyer an average of 7.2%, a percentage point less than that reported by the respondents of 1981.

In general, cost increases were less for fewer number of the 1982 respondents than for those who answered our survey last year. In 1981, more than 85% of the respondents reported paying wage increases that averaged 9.25%; 1982's returns showed some 62% paying increases that averaged 7.6%. Similarly, the costs of raw material, fuel/energy, and maintenance went up for about 75% of this year's respondents compared to about 90% of last year's respondents. The rates of increase also were lower:

Cost	1982 % Increase	1981 % Increase
raw material	7.3%	10.3%
fuel/energy	12.2%	20.7%
maintenance	9.6%	14.7%

Transportation costs rose by a weighted average of 7.8% for 68.3% of those answering the 1982 survey; in 1981, 98.4% of those responding paid an average increase of 12.75%. Regionally, percentages of increases in all cost categories ranged from around 6% to about 13%.

Tight money also was reflected in the description of maintenance headaches. Nearly every respondent cited problems with aging equipment—trucks in particular. Comments also expressed frustration with the lack of replacement parts and the high cost of parts when available.

Outlook for 1983

Despite a bleak 1982, slightly more than 40% of this year's respondents expect business to be better in 1983; that figure represents a few more optimists than the 35.6% of 1981's respondents. On the other hand, 36% expect 1983 to be a year of further decline in the economy and the industry or a year similar to 1982. Add that percentage to the nearly one-quarter of the respondents who are "unsure" about 1983 and a picture emerges of an industry, as described by one respondent, "just trying to keep our heads above the water line."

Most of any money spent in 1983 by survey respondents will be for new equipment. Only 40% plan to spend anything. Of that number, slightly more than 60% will invest in new equipment, another 33% plan modernization of facilities, and 6.3% are looking at plans for new plants. As has been the case for several years, investment plans are contingent upon a noticeable improvement in the economy—one that looks, in the words of one producer, "as if it might hold for a while." ●

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Precast concrete

Production drops in 1982; most precasters see growth through 1983

BY CHARLES STEELE

Led by a 32% production drop in the Sun Belt, output of the precast concrete industry declined 9% in 1982, following a year of healthy growth.

Production declined in four out of five survey regions, specifically by 7% in the Southeast, 3% in the North Central region, and by 1% in the West. A 4% recovery in the Northeast placed 1982 national production figures at −9% compared to 1981.

One year earlier, in 1981, precasters had gained 12.6% in volume. Despite this year's production decline, precasters are bullish on 1983 markets. More than 62% expect to improve volume while only 10% foresee a decline. Another 18% predict "no change" and 9% are unsure.

Precasters are investing profits in their business. In 1983, 12% report plans to build a new plant. Of these, 20% will spend more than $500,000. Another 37% will purchase new equipment. One-fifth will expand facilities.

Precasters are involved in a widening range of activities. More than half participated in residential precasting while 36% were engaged in general precasting and 33% in utility projects.

In recognition of the growing opportunities in precasting, more producers (78%), are promoting the product. This is an increase from the 71% that budgeted advertising and promotion monies in 1982.

Economic conditions and increased competition have forced producers to attempt to hold prices of precast products. Only 51% of the sample raised prices in 1982; increases averaged 7.3%.

One year earlier, 79% had raised prices by more than 9%. Precasters also tried to control wages which, almost without exception, were raised in 1981. This year, only two-thirds of producers granted pay hikes to workers; the increases averaged 8.3%.

For the second consecutive year, maintenance was at the leading edge of increased business costs. Respondents report that 79% of the plants surveyed absorbed increases averaging 16.9%. Of the producers that identified a specific major maintenance problem, half cited trucks. Others identified cranes and forms.

Significantly, raw material costs also jumped, by 15.3%, according to 82% of the sample. Higher fuel and energy costs, reported by 80% of the plant owners, averaged 14.25%.

Looking forward to growth in 1983, almost one-third of the sample expects to capitalize on increased housing activity in their market areas. Other key areas of anticipated growth are utilities, commercial construction, and architectural precasting.

Asked to identify major factors affecting their businesses, precasters cited interest rates in 45% of the returns. Consumer confidence in the economy is significant to many, as well. One midwestern precaster wrote, "Interest rates, of course, have a great bearing on the housing market, for which our primary products are geared. The single most important factor, however, is the confidence the consumer holds for our economy and the future. No matter how much the economy improves, if the consumer has no faith in it, he will not spend his money." ●

Summary
Concrete Magazine's
Precast Concrete Survey

Review of 1982	
Industry output	
1982 vs. 1981	−9%
Pricing of products	
prices raised (% replies)	51%
% raised	7.3%
Costs	
• Wages	
increased (% replies)	66%
% increased	8.3%
• Maintenance	
increased (% replies)	79%
% increased	16.9%
• Raw materials	
increased (% replies)	82%
% increased	15.3%
• Energy	
increased (% replies)	80%
% increased	14.25%
Outlook for 1983	
Production gain (% replies)	62%
Production drop (% replies)	10%
No change	18%
Unsure	9%
Plans for 1983	
New plants (% replies)	12%
Replace equipment (% replies)	37%
Expansion (% replies)	20%

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Prestressed concrete

Industry hindered by rising operating costs

BY CHARLES STEELE

Prestressed concrete producers held volume at levels near those of one year earlier despite worsening economic conditions, declining by little more than 1% in 1982. In last year's survey, volume had dropped by 8%, due almost entirely to poor performance in Northeast regional production.

In the 1982 survey, three of five regions declined in volume, led again by the Northeast, down 23%. Prestressed concrete producers in the North Central area report a drop of 10% while those in the West were off by 9%.

This year, producers in the Southwest and Southeast led the nation, reporting gains of 11% and 16%, respectively. These figures represent considerable growth in the Sun Belt region; last year, the Southwest and West posted gains of only 9% and 4.4%, respectively.

Overall, 40% of the prestressed concrete producers gained volume in 1982, 12.5% stayed even, and 47% declined. Notably, only 26% of the producers in the North Central and Northeast regions gained volume in 1982, indicating that real growth in those areas was being experienced by a small number of major producers.

Nationally, 47% of the respondents raised prices by a 7% average; only 5% raised prices by 10% or more. These figures are slightly more moderate than those of 1 year ago, when 97% of the producers increased prices by an average of 7.8%.

As in earlier surveys, pressure of rising operating costs continued to mount. Almost all respondents (95%) encountered increased maintenance costs that averaged 13%. Of these respondents, 73% absorbed costs of 10% or more.

Among producers that identified a specific maintenance problem, one-fifth cited cranes and another 14% indicated rolling stock.

Higher energy costs were absorbed by 85% of the prestressers, at an average increase of 15%. Increases in raw material costs were less severe; three-quarters of the respondents reported an escalation averaging 6.7%.

Two years ago, when prestressed concrete producers were asked to comment on the 1982 market, better than five of seven predicted business would improve. Again, producers are optimistic; almost half of the survey respondents foresee a production gain in 1983. Another 22% expect production to decline, while 16% predict "no change" and 13% are unsure.

Many prestressed concrete suppliers are looking forward to adding equipment and improving their facilities in 1983. Approximately 9% plan to build a new plant, at an average cost of $825,000. Of these, one-third will spend $2.5 million or more. A significant number of producers, equalling 44%, will replace equipment in 1983, making an average expenditure of $203,000. Also, 26% will expand their plant facilities at a typical cost of $346,000. Of these, 16% will spend more than $500,000.

In this year's sample, it was found that 87% of respondents exclusively performed pretensioning and 3% were involved only in posttensioning. The remaining 10% did both.

Also, producers were asked to identify any factors that affected their business futures. The leading factor, interest rates, was identified by 63%, followed by local construction activity, mentioned by 13%. Other areas of concern included energy costs and government regulation. For the most part, prestressed concrete producers show confidence in their product and believe they will operate profitably in the coming year, despite less-than-ideal economic conditions. One Texas producer stated, "Now we must make architects and engineers more aware of prestressed concrete through additional marketing efforts." ●

Summary
Concrete Magazine's
Prestressed Concrete Survey

Review of 1982	
Industry output 1982 vs. 1981	−1%
Pricing of products	
prices raised (% replies)	47%
% of rates	7%
no change (% replies)	53%
Costs	
• Wages	
increased (% replies)	89%
% of increase	7.8%
• Maintenance	
increased (% replies)	95%
% of increase	13%
• Raw materials	
increased (% replies)	77%
% of increase	6.7%
• Energy	
increased (% replies)	85%
% of increase	15%
Outlook for 1983	
Production gain (% replies)	48%
% of gain	14.6%
Production drop (% replies	22%
% of drop	16.2%
No change	16%
Unsure	13%
Plans for 1983	
New plants (% replies)	9%
Replace equipment (% replies)	44%
Expansion (% replies)	26%

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Concrete pipe

Production decline continues through third straight year, but some optimism surfaces

BY CHARLES STEELE

Although overall output of concrete pipe declined for the third consecutive year, some optimism for improved business conditions was seen in the 1982 producer survey.

For the first time in 2 years, producers in at least one region finally posted a gain in volume; the Southwest was up 3%. Also, for the first time since the recent recession set it, plant owners are predicting a production gain for 1983. More than 36% believe output will grow next year, offsetting another 22% who state the national decline in pipe production will continue through a fourth straight year.

On the heels of a significant 16% drop in 1981, respondents revealed that production decreased by another 8% this year. Declines were reported in the Southeast, down 16%; the North Central region, off 8%; and in the West which lost 4% of volume from depressed 1981 levels. Production in the Northeast, which plummeted 42% in 1981, remained even, at that low level, through last year.

Overall, 25% of the plant owners responding to the survey increased volume; 63% reported a decline. Approximately 12% estimate 1983 production will be equal to that of 1 year earlier.

Most pipe producers held the line on prices last year in response to soft economic conditions and increased competition. Only 33% of the sample raised prices, by an average of 6.9%, compared to 73% of the 1981 respondents who hiked prices by 9.05%. Only 11% of the 1982 respondents raised prices more than 10%.

Prices were held despite a rapid escalation of costs. Wages were increased an average of 6.8% by more than 86% of the producers with 11% of the sample granting pay hikes of 10% or more. Almost all pipe producers (92%), absorbed higher maintenance costs, averaging 14%. Only three of every ten producers absorbed a maintenance cost increase of less than 10%.

Energy continued to be a major cost factor to pipe producers; 82% absorbed an increase averaging 17.5%. This increase mirrored that of 1 year earlier when energy costs leaped 17.3%, as reported by 89% of the 1981 respondents. Raw materials increased by 9.7%, according to 77% of the sample.

Among major problems listed by pipe producers were wear parts, noted by 21% of the sample, followed by forklifts, at 11%, and batching equipment, cited by another 4%. Pipe making machines, mixers, and boilers were mentioned by other producers.

While a turnaround is anticipated by some, most producers reveal conservative spending plans for 1983. No respondent inficated firm plans to build a new plant, but 28% will spend an average of $96,000 on new equipment. In addition, 10% will take on plant expansion at an average cost of $116,000. Both spending levels are significantly less than the average spending plans reported in the 1981 survey.

The leading factor in 1983 business will be interest rates, according to 43% of the respondents. Many producers hope pipe usage will increase in communities where obsolete streets, roads, and sewer systems will be upgraded or replaced. ●

Summary
Concrete Magazine's Concrete Pipe Survey

Review of 1981	
Industry output 1982 vs. 1981	−6%
Pricing of products	
prices raised (% replies)	33%
% raised	6.9%
Costs	
• Wages	
increased (% replies)	86%
% of increase	6.8%
• Maintenance	
increased (% replies)	92%
% of increase	14%
• Raw materials	
increased (% replies)	77%
% of increase	9.7%
• Energy	
increased (% replies)	82%
% of increase	17.5%
Outlook for 1983	
Production gain (% replies)	36%
% of gain	9.8%
Production drop (% replies)	22%
% of drop	12.3%
No change	20%
Unsure	20%
Plans for 1983	
New Plants (% replies)	—
Replace equipment (% replies)	28%
Expansion (% replies)	10%